

### REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated September 8, 2005 (U.S. Patent Office Paper No. 0812005). In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

#### Status of the Claims

As outlined above, claims 1, 5, 11 and 13 are being amended to correct formal errors and to more particularly point out and distinctly claim the subject invention. Claims 2-4 and 8 were previously canceled from this application. In addition, new claims 14-25 are hereby submitted for consideration. Applicant hereby submits that no new matter is being introduced into the application through the submission of this response.

#### Formal Objections or Rejections

Claim 5 was objected to for a minor formal error, and has been corrected as outlined above. Applicant respectfully requests withdrawal of this formal objection.

#### Prior Art Rejections

The Examiner rejected claims 1, 5-7 and 9-13 under 35 U.S.C. § 103(a) as being unpatentable over Iwamura et al. (US Application No. 2004/0049553) in view of Ofek et al. (US Patent No. 6,108,748).

The present invention as recited in claim 1 is directed to a migration destination file sharing device communicably connected to a migration source file sharing device and a host computer via a communications network. The migration destination file sharing device includes means for relating a shared file system of the migration source file sharing device to the shared file system of the migration destination file sharing device, the migration source shared file system having a plurality of files; means for migrating data from the migration source file sharing device to the migration destination file sharing device on a file by file basis; means for setting or changing a migration status of each file; means for causing access from the host computer to be switched from the migration source file sharing device to the migration destination file sharing device; means for detecting the migration status of data to

which access has been requested by the host computer; means for providing the data from the file system of the migration destination file sharing device in a case where the detected migration status of the data is a status where the data can be used from the file system of the migration destination file sharing device; and means for providing the data from the file system of the migration source file sharing device in a case where the detected migration status of the data is a status where the data cannot be used from the file system of the migration destination file sharing device.

As recited in claim 11, the present invention is directed to a method of causing data to migrate from a file system of a migration source file sharing device to a file system of a migration destination file sharing device via a communications network, the method including the steps of: relating a shared file system of the migration source file sharing device to the shared file system of the migration destination file sharing device, the migration source shared file system having a plurality of files; migrating data from the migration source file sharing device to the migration destination file sharing device on a file by file basis; setting or changing a migration status of each file; causing access from a host computer to be switched from the migration source file sharing device to the migration destination file sharing device; detecting the migration status of data to which access has been requested by the host computer; providing the data from the file system of the migration destination file sharing device in a case where the detected migration status of the data is a status where the data can be used from the file system of the migration destination file sharing device; and providing the data from the file system of the migration source file sharing device in a case where the detected migration status of the data is a status where the data cannot be used from the file system of the migration destination file sharing device.

As recited in claim 13, the present invention is directed to a computer program stored in a computer readable medium and for causing data to migrate from a migration source file sharing device to a migration destination file sharing device via a communications network, comprising: a module for relating a shared file system of the migration source file sharing device to the shared file system of the migration destination file sharing device, the migration source shared file system having a plurality of files; a module for migrating data from the migration source file sharing device to the migration destination file sharing device on a file by file basis; a module for setting or changing a migration status of each file; a module for causing access from a host computer to be switched from the migration source file sharing device to the computer; a module for detecting the migration status of data to which access

has been requested by the host computer; a module for providing the data from the file system of the computer in a case where the detected migration status of the data is a status where the data can be used from a file system of the computer; and a module for providing the data from a file system of the migration source file sharing device in a case where the detected migration status of the data is a status where the data cannot be used from the file system of the computer.

According to new claim 20, in a file sharing system that comprises a host computer, a source file sharing device, and a destination file sharing device communicably connected to the source file sharing device and the host computer via a communications network, the present invention is directed to the destination file sharing device incorporating a control unit operatively formed to migrate data from the source file sharing device to the destination file sharing device. Also, the control unit includes a first component that relates a shared file system of the source file sharing device to the shared file system of the destination file sharing device, the source shared file system having a plurality of files; a second component that migrates the data from the source file sharing device to the destination file sharing device on a file by file basis; a third component that sets or changes a migration status of each file; a fourth component that causes access from the host computer to switch from the source file sharing device to the destination file sharing device; a fifth component that detects the migration status of the data to which access has been requested by the host computer; a sixth component that provides the data from the file system of the destination file sharing device in a case where the detected migration status of the data is a status where the data can be used from the file system of the destination file sharing device; and a seventh component that provides the data from the file system of the source file sharing device in a case where the detected migration status of the data is a status where the data cannot be used from the file system of the destination file sharing device.

Among the main features of the present invention, data is migrated from the migration source file sharing device to the migration destination file sharing device on a file by file basis. This means that data is organized, managed and transferred from the source to the destination as separate files or file units (see for example p. 23, lines 24-25; p. 24, line 19 to p. 25, line 4). This structure and operation has the advantages of, among others, no interruption of file sharing service during data migration and high responsiveness of file sharing service during data migration.

In contrast, Iwamura '553 is directed to a system and operation that are LUN-based. Specifically, as recited in paragraph [0054]:

*FIG. 3 shows a general outline of processing for migrating to the migration target storage subsystem 110 in an environment having the migration source storage subsystem 100 in which a storage area 301 and a storage area 302 have been provided within the storage subsystem, and a host 120A connected through the local network segment 150. In this case, it is assumed that the storage area 301 and the storage area 302 are assigned LU\_A and LU\_B respectively as an identifier (hereinafter, referred to as LUN) to be designated by the host to perform I/O processing. It is assumed that the MAC address of the NIC 199 of the migration source storage subsystem 100 is HWAddrOld, and the MAC address of NIC 199 of the migration target storage subsystem 110 is HWAddrNew. Further, it is assumed that IP address AddressA is configure to the NIC 199 of the migration source storage subsystem 100. In this respect, although in the figure, there exist only two storage areas and one host, the present invention is not limited thereto.*

The storage areas 301, 302, 303, 304 (see Figure 3) may be entire RAID disk devices, and data is managed and migrated in terms of entire disk devices to other disk devices, as indicated in paragraph [0068]:

*(7) Finally, the migration target storage subsystem 110 copies data of the storage area 301 and the storage area 302 to the storage area 303 and the storage area 304 while transferring the I/O request from the host 120A to the migration source storage subsystem 100 (data copy 322).*

As recognized by the Examiner, Iwamura '553 does not disclose, teach or suggest any structure or operation for causing access from a host computer to be switched from the migration source file sharing device to the migration destination file sharing device; detecting the migration status of data to which access has been requested by the host computer; providing the data from the file system of the migration destination file sharing device in a case where the detected migration status of the data is a status where the data can be used from the file system of the migration destination file sharing device; and providing the data from the file system of the migration source file sharing device in a case where the detected migration status of the data is a status where the data cannot be used from the file system of

the migration destination file sharing device. In addition and in particular, this reference does not disclose, teach or suggest any structure or operation by which, among other features, data is migrated from the source file sharing device to the destination file sharing device on a file by file basis.

Ofek '748 is directed to data migration system organized in terms of physical devices, volumes and tracks. As recited in column 8, lines 8-17 and shown in Figure 2:

*An exemplary data element map/table 24 is shown in greater detail in FIG. 2. In the preferred embodiment, the data map/table 24 is organized in a hierarchical fashion. For example, for the preferred embodiment wherein the data storage system includes a plurality of longer term data storage devices such as disk drives 17a-17n, and wherein each disk drive is partitioned into one or more logical "volumes" and each volume comprises a number of disk drive tracks, the data map/table 24 will first have an entry 50 for each physical and/or logical device such as a disk drive.*

Ofek '748 also cannot and does not disclose, teach or suggest any structure or operation by which, among other features, data is migrated from the source file sharing device to the destination file sharing device on a file by file basis.

Consequently, Ofek '748 cannot make up for the deficiencies in Iwamura '553 such that their combination could embody each and every feature of the present invention as now claimed. Rather, the combination of Iwamura '553 and Ofek '748 would still not does not disclose, teach or suggest any structure or operation by which, among other features, data is migrated from the source file sharing device to the destination file sharing device on a file by file basis. As a result, the present invention is distinguishable and thereby allowable over the combination of these references.

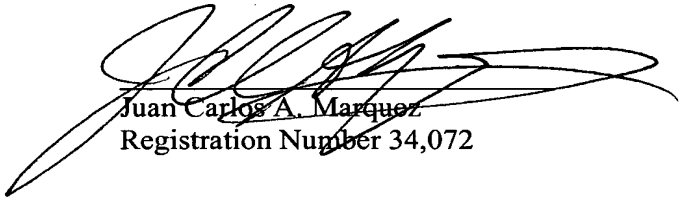
### Conclusion

In view of all the above, Applicant respectfully submits that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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